Forest Health Protection
Pacific Southwest Region

Date: August 30, 2010
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To: Patricia Grantham, Forest Supervisor, Klamath National Forest

Subject: Biological Evaluation of Jessup Compartment Plantations – Salmon River Ranger District (FHP Report No. N10-006)

On June 1 – 4, 2010, Cynthia Snyder (Entomologist) and Pete Angwin (Plant Pathologist) from Forest Health Protection visited the Klamath National Forest to review current and future thinning projects requesting FHP funding with Roger Siemers (Klamath National Forest SO).

On June 2, Cynthia, Pete and Roger were joined by Dave Burgess (Salmon/Scott River Ranger Districts) to look at possible Western Bark Beetle Initiative funding for the Jessup Compartment planned for thinning in FY2011.

Observations and recommendations for the planned projects areas are as follows:

Jessup Compartment
The Klamath NF wants to accomplish 96 acres of thinning, piling and burning in older pine plantations in FY2011. This project area is covered under the Great Scott NEPA, which was signed on 07/09/2007. We visited plantation units 422-48 (N41º16.501', W123º12.290'), 422-46 (N41º16.225', W123º12.788'), 422-45 (N41º16.132', W123º12.704'), 422-73 (N41º16.332', W123º11.742'), 422-71 (N41º16.174', W123º11.815') and 422-70 (N41º16.279', W123º11.845'). Units along the opposite sides of the road from these stands were previously thinned in the same manner as the proposed treatment and provided a good comparison of current condition and desired outcome (Figures 1 and 2).

These plantations were planted with Jeffery pine in 1962-1963. Trees were originally planted at 6 x 6 foot spacing, about 450-600 trees per acre (TPA) and Douglas-fir, white fir, sugar pine and incense cedar have seeded in naturally. Thinning was done in some stands in 1984 bringing the residual spacing to nearly 12x12 foot. Spacing is currently about 6-12 foot with most of the trees about 6-10 inches DBH, density is 250-600 TPA reaching capacity with canopies interlocking and self-pruning actively occurring.

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The majority of the trees occupy the codominant crown class have created a closed canopy. The stands are very dense, and the risk to attack by western and mountain pine beetle (*Dendroctonus brevicomis* and *D. ponderosae*, respectively) is increasing. The risk to crown fire and mortality from drought is likewise increasing. Douglas-fir dwarf mistletoe is present throughout the plantations.

Figure 1. Stand 422-46, overly dense PP with ingrowth of WF (before treatment).

Figure 2. Stand opposite of 422-44, thinned from below to 22 foot spacing and masticated in 2009 (after treatment).

The District plans to thin the plantations from below to 12 inches DBH, leaving only the healthiest, most vigorous, defect-free trees. They plan to favor Jeffery pine but preserve a mix of species for diversity. Cut material will be either piled and burned or lopped and scattered, depending on site, leaving a 22 foot spacing. Mastication will be used to remove brush and precommercial-sized trees where possible. These treatments will be sufficient to reduce bark beetle risk and meet Regional Density Management policy.

Supporting Details	
Forest Type	Plantations
Location	Matrix
Landscape Treatment	Thin to 25-40 foot spacing and pile
Proposed Treatment	Primarily hand thin
NEPA	Great Scott signed 2007
Proposed Acres	96
Requested Funding	$82,368
Total Cost Per Acre	$858
Matching Funding	None
Species Composition	JP, PP, DF, WF, IC, SP, Oak
Current Diameters	6-14 inches DBH
Residual Diameters	7-12 inches DBH
Current Stocking	400-600 TPA
Target Stocking	90-109 TPA
Agents of Concern	*D. brevicomis, D. ponderosae*
Recent Activity	None

Current Susceptibility	High

Summary

The proposed treatments, if fully implemented, will be effective in addressing concerns regarding bark beetles, fire and drought, and will meet the Regional Forester's density management policy that high risk density levels will not be reached again for at least 20 years. I fully support the treatments as described.

If you have any questions regarding this report and/or need additional information please contact Cynthia Snyder at 530-226-2437 or Pete Angwin at 530-226-2436.

/s/ Cynthia Snyder

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